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Two-loop non-planar master integrals for four-point massless scattering with top quark loop

In my talk, I will discuss the analytical results for a non-planar family of master integrals appearing in NNLO 2-loop diagrams of scattering amplitudes of diphoton and dijet production processes. We use the method of differential equations keeping the full dependence on the top quark's mass running in the loop to obtain the results for these master integrals up to O(\epsilonˆ4). The top sector of this MI family involves elliptic curves. After briefly discussing the nature of these elliptic curves, I will talk about the functional form of our analytical results and the boundary constants.

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